

FCC RF EXPOSURE REPORT

FCC ID: 2AOHHTURBOXC7230C

Project No. : 2307C207A
Equipment : Smart Module
Brand Name : TurboX
Test Model : C7230C
Series Model : N/A
Applicant : Thundercomm Technology Co., Ltd
Address : No. 107, Middle Datagu Road, Xiantao Street, Yubei District,
Chongqing, China, 401122
Manufacturer : Thundercomm Technology Co., Ltd
Address : No. 107, Middle Datagu Road, Xiantao Street, Yubei District,
Chongqing, China, 401122
Factory : Thundercomm Technology Co., Ltd
Address : No. 107, Middle Datagu Road, Xiantao Street, Yubei District,
Chongqing, China, 401122
Issued Date : May 28, 2024
Report Version : R00
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091 & KDB 447498 D01 v06

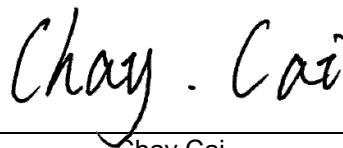
The above equipment has been evaluated and found compliance with the requirement of the relative standards by BTL Inc.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-5-2307C207A	R00	Original Report.	May 28, 2024	Valid

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

2. CALCULATED RESULT

Worse case data:

Mode	*Measured RF Output Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	FCC Limit (mW/cm ²)
Bluetooth	7.23	3.35	20	0.0023	1.0
2.4G Wi-Fi MIMO	24.69	6.36	20	0.2533	1.0
5G Wi-Fi MIMO	19.96	5.09	20	0.0636	1.0

Note:

1. BT(hopping) RF Output Power: Refer to SZ22110114W02
2. BLE RF Output Power: Refer to SZ22110114W01
3. *2.4GHz Band RF Output Power: Refer to RF230731014-01-001
4. *5GHz Bands RF Output Power: Refer to SZ22110114W04

For the max simultaneous transmission MPE:

Simultaneous transmission Scenarios

No.	Simultaneous transmission Scenarios
1	Bluetooth
2	2.4GHz Wi-Fi MIMO
3	5GHz Wi-Fi MIMO
4	2.4GHz Wi-Fi MIMO + 5GHz Wi-Fi MIMO

1) For Bluetooth

The MPE ratio for Bluetooth can be calculated as follow:

=The power density at 20cm distance/MPE limit
=0.0023 mW/cm²

2) For 2.4GHz MIMO:

The MPE ratio for 2.4GHz Wi-Fi MIMO can be calculated as follow:

=The power density at 20cm distance/MPE limit
=0.2533 mW/cm²

3) For 5GHz Wi-Fi MIMO:

The MPE ratio for 5GHz Wi-Fi MIMO can be calculated as follow:

=The power density at 20cm distance/MPE limit
=0.0636 mW/cm²

4) For 2.4GHz MIMO + 5GHz Wi-Fi MIMO:

The sum of the MPE ratios for all simultaneous transmitting antennas:

=0.2533+0.0636
=0.3169 <1.0

As the sum of MPE ratios for all simultaneous transmitting antennas is ≤ 1.0, simultaneous transmission MPE test exclusion will be applied.

Note: The test results reference to report which is provided by the manufacturer.
(Report No.: RF230731014-01-005)

End of Test Report